

0590
0726

11



ENTERED OIPE

RAW SEQUENCE LISTING

DATE: 08/07/2002 8.6

PATENT APPLICATION: US/09/963,827B

TIME: 11:30:36

Input Set : A:\180-124-2 updated 05-03-02.ST25.txt

Output Set: N:\CRF3\08072002\I963827B.raw

```

3 <110> APPLICANT: Duke University
4     Sullenger, Bruce
5     Rusconi, Christopher
7 <120> TITLE OF INVENTION: RNA APTAMERS AND METHODS FOR IDENTIFYING THE SAME
9 <130> FILE REFERENCE: 180/124/2
11 <140> CURRENT APPLICATION NUMBER: 09/963,827B
12 <141> CURRENT FILING DATE: 2001-09-26
14 <150> PRIOR APPLICATION NUMBER: 60/235,654
15 <151> PRIOR FILING DATE: 2000-09-26
17 <160> NUMBER OF SEQ ID NOS: 227
19 <170> SOFTWARE: PatentIn version 3.0
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 96
23 <212> TYPE: RNA
C--> 24 <213> ORGANISM: Artificial
26 <220> FEATURE:
27 <223> OTHER INFORMATION: RNA aptamer
29 <220> FEATURE:
30 <221> NAME/KEY: misc_feature
31 <222> LOCATION: (1)..(96)
32 <223> OTHER INFORMATION: RNA aptamer
35 <400> SEQUENCE: 1
36 gggagagagg aagaggggaug ggccgccagu gggaagcuau acccaacgcc ccagccccag      60
38 agcauaaccc agaggucgau aguacuggau cccccc      96
41 <210> SEQ ID NO: 2
42 <211> LENGTH: 96
43 <212> TYPE: RNA
C--> 44 <213> ORGANISM: Artificial
46 <220> FEATURE:
47 <223> OTHER INFORMATION: RNA aptamer
49 <220> FEATURE:
50 <221> NAME/KEY: misc_feature
51 <222> LOCATION: (1)..(96)
52 <223> OTHER INFORMATION: RNA aptamer
55 <400> SEQUENCE: 2
56 gggagagagg aagaggggaug ggcuaauaac acgcugguga ucccauca auugaaacaa      60
58 cacauaaccc agaggucgau aguacuggau cccccc      96
61 <210> SEQ ID NO: 3
62 <211> LENGTH: 96
63 <212> TYPE: RNA
C--> 64 <213> ORGANISM: Artificial
66 <220> FEATURE:
67 <223> OTHER INFORMATION: RNA aptamer

```

RAW SEQUENCE LISTING

DATE: 08/07/2002

PATENT APPLICATION: US/09/963,827B

TIME: 11:30:36

Input Set : A:\180-124-2 updated 05-03-02.ST25.txt

Output Set: N:\CRF3\08072002\I963827B.raw

```

69 <220> FEATURE:
W--> 70 <221> NAME/KEY: RNA aptamer
71 <222> LOCATION: (1)..(96)
72 <223> OTHER INFORMATION: RNA aptamer
75 <400> SEQUENCE: 3
76 gggagagagg aagaggggaug gggacuauac cgcguaaugc ugccucccca uuccggaacg      60
78 cucauaaccc agaggucgau aguacuggau cccccc      96
81 <210> SEQ ID NO: 4
82 <211> LENGTH: 95
83 <212> TYPE: RNA
C--> 84 <213> ORGANISM: Artificial
86 <220> FEATURE:
87 <223> OTHER INFORMATION: RNA aptamer
89 <220> FEATURE:
90 <221> NAME/KEY: misc_feature
91 <222> LOCATION: (1)..(95)
92 <223> OTHER INFORMATION: RNA aptamer
95 <400> SEQUENCE: 4
96 gggagagagg aagaggggaug ggcacuauac gcaucuugcu gccugcccgc gagucaaau      60
98 gcauaaccca gagguccgau guacuggauc ccccc      95
101 <210> SEQ ID NO: 5
102 <211> LENGTH: 96
103 <212> TYPE: RNA
C--> 104 <213> ORGANISM: Artificial
106 <220> FEATURE:
107 <223> OTHER INFORMATION: RNA aptamer
109 <220> FEATURE:
110 <221> NAME/KEY: misc_feature
111 <222> LOCATION: (1)..(96)
112 <223> OTHER INFORMATION: RNA aptamer
115 <400> SEQUENCE: 5
116 gggagagagg aagaggggaug ggccuaccag uucguggcua gcgugacgua ccacccaggg      60
118 accauaaccc agaggucgau aguacuggau cccccc      96
121 <210> SEQ ID NO: 6
122 <211> LENGTH: 96
123 <212> TYPE: RNA
C--> 124 <213> ORGANISM: Artificial
126 <220> FEATURE:
127 <223> OTHER INFORMATION: RNA aptamer
129 <220> FEATURE:
130 <221> NAME/KEY: misc_feature
131 <222> LOCATION: (1)..(96)
132 <223> OTHER INFORMATION: RNA aptamer
135 <400> SEQUENCE: 6
136 gggagagagg aagaggggaug ggcgauaacc aacaugguga ucccaucau cauaccuac      60
138 aacauaaccc agaggucgau aguacuggau cccccc      96
141 <210> SEQ ID NO: 7
142 <211> LENGTH: 96
143 <212> TYPE: RNA

```

RAW SEQUENCE LISTING

DATE: 08/07/2002

PATENT APPLICATION: US/09/963,827B

TIME: 11:30:36

Input Set : A:\180-124-2 updated 05-03-02.ST25.txt

Output Set: N:\CRF3\08072002\I963827B.raw

```

C--> 144 <213> ORGANISM: Artificial
      146 <220> FEATURE:
      147 <223> OTHER INFORMATION: RNA aptamer
      149 <220> FEATURE:
      150 <221> NAME/KEY: misc_feature
      151 <222> LOCATION: (1)..(96)
      152 <223> OTHER INFORMATION: RNA aptamer
      155 <400> SEQUENCE: 7
      156 gggagagagg aagaggggaug gggccaccua cuauaccggu caucgugcau aggucgcugc 60
      158 cacauaacc agaggucgau aguacuggau cccccc 96
      161 <210> SEQ ID NO: 8
      162 <211> LENGTH: 95
      163 <212> TYPE: RNA
C--> 164 <213> ORGANISM: Artificial
      166 <220> FEATURE:
      167 <223> OTHER INFORMATION: RNA aptamer
      169 <220> FEATURE:
      170 <221> NAME/KEY: misc_feature
      171 <222> LOCATION: (1)..(95)
      172 <223> OTHER INFORMATION: RNA aptamer
      175 <400> SEQUENCE: 8
      176 gggagagagg aagaggggaug ggucucacac ccgaagaugg ccaaagaggg agaugaguuu 60
      178 ccauaaccga gaggucgaua guacuggauc cccccc 95
      181 <210> SEQ ID NO: 9
      182 <211> LENGTH: 96
      183 <212> TYPE: RNA
C--> 184 <213> ORGANISM: Artificial
      186 <220> FEATURE:
      187 <223> OTHER INFORMATION: RNA aptamer
      189 <220> FEATURE:
      190 <221> NAME/KEY: misc_feature
      191 <222> LOCATION: (1)..(96)
      192 <223> OTHER INFORMATION: RNA aptamer
      195 <400> SEQUENCE: 9
      196 gggagagagg aagaggggaug ggacuauauu cggaaucugg acucccaccu gccugcccca 60
      198 gacauaacc agaggucgau aguacuggau cccccc 96
      201 <210> SEQ ID NO: 10
      202 <211> LENGTH: 96
      203 <212> TYPE: RNA
C--> 204 <213> ORGANISM: Artificial
      206 <220> FEATURE:
      207 <223> OTHER INFORMATION: RNA aptamer
      209 <220> FEATURE:
      210 <221> NAME/KEY: misc_feature
      211 <222> LOCATION: (1)..(96)
      212 <223> OTHER INFORMATION: RNA aptamer
      215 <400> SEQUENCE: 10
      216 gggagagagg aagaggggaug ggcgauauac acauugguga ucccaccac augaaaccac 60
      218 agcauaacc agaggucgau aguacuggau cccccc 96

```

RAW SEQUENCE LISTING

DATE: 08/07/2002

PATENT APPLICATION: US/09/963,827B

TIME: 11:30:36

Input Set : A:\180-124-2 updated 05-03-02.ST25.txt

Output Set: N:\CRF3\08072002\I963827B.raw

```

221 <210> SEQ ID NO: 11
222 <211> LENGTH: 96
223 <212> TYPE: RNA
C--> 224 <213> ORGANISM: Artificial
226 <220> FEATURE:
227 <223> OTHER INFORMATION: RNA aptamer
229 <220> FEATURE:
230 <221> NAME/KEY: misc_feature
231 <222> LOCATION: (54)..(56)
232 <223> OTHER INFORMATION: n=c, u or a
235 <220> FEATURE:
236 <221> NAME/KEY: misc_feature
237 <222> LOCATION: (1)..(96)
238 <223> OTHER INFORMATION: RNA aptamer
241 <400> SEQUENCE: 11
W--> 242 gggagagagg aagaggggaug ggcucaucac aggcgaagug aacaacacua ccgncnaguu      60
244 accauaacc agaggucgau aguacuggau cccccc      96
247 <210> SEQ ID NO: 12
248 <211> LENGTH: 95
249 <212> TYPE: RNA
C--> 250 <213> ORGANISM: Artificial
252 <220> FEATURE:
253 <223> OTHER INFORMATION: RNA aptamer
255 <220> FEATURE:
256 <221> NAME/KEY: misc_feature
257 <222> LOCATION: (1)..(95)
258 <223> OTHER INFORMATION: RNA aptamer
261 <400> SEQUENCE: 12
262 gggagagagg aagaggggaug gggacuauac gugaacgacu gcauccacuu ccccgccaug      60
264 gcauaaccca gaggucgaua guacuggauc ccccc      95
267 <210> SEQ ID NO: 13
268 <211> LENGTH: 96
269 <212> TYPE: RNA
C--> 270 <213> ORGANISM: Artificial
272 <220> FEATURE:
273 <223> OTHER INFORMATION: RNA aptamer
275 <220> FEATURE:
276 <221> NAME/KEY: misc_feature
277 <222> LOCATION: (1)..(96)
278 <223> OTHER INFORMATION: RNA aptamer
281 <400> SEQUENCE: 13
282 gggagagagg aagaggggaug ggccauacgu ggacgacugc acccgacccu ucagcccagg      60
284 uccauaacc agaggucgau aguacuggau cccccc      96
287 <210> SEQ ID NO: 14
288 <211> LENGTH: 96
289 <212> TYPE: RNA
C--> 290 <213> ORGANISM: Artificial
292 <220> FEATURE:
293 <223> OTHER INFORMATION: RNA aptamer

```

RAW SEQUENCE LISTING

DATE: 08/07/2002

PATENT APPLICATION: US/09/963,827B

TIME: 11:30:36

Input Set : A:\180-124-2 updated 05-03-02.ST25.txt

Output Set: N:\CRF3\08072002\I963827B.raw

```

295 <220> FEATURE:
296 <221> NAME/KEY: misc_feature
297 <222> LOCATION: (1)..(96)
298 <223> OTHER INFORMATION: RNA aptamer
301 <400> SEQUENCE: 14
302 gggagagagg aagaggggaug ggaccgauacg cacauugcug aaucuccuc aauagcaccu      60
304 accauaacc agaggucgau aguacuggau ccccc      96
307 <210> SEQ ID NO: 15
308 <211> LENGTH: 96
309 <212> TYPE: RNA
C--> 310 <213> ORGANISM: Artificial
312 <220> FEATURE:
313 <223> OTHER INFORMATION: RNA aptamer
315 <220> FEATURE:
316 <221> NAME/KEY: misc_feature
317 <222> LOCATION: (54)..(54)
318 <223> OTHER INFORMATION: n=c or u
321 <220> FEATURE:
322 <221> NAME/KEY: misc_feature
323 <222> LOCATION: (1)..(96)
324 <223> OTHER INFORMATION: RNA aptamer
327 <400> SEQUENCE: 15
W--> 328 gggagagagg aagaggggaug ggccauaacc acuuugguga acccaccag cucnugugau      60
330 ugcauaacc agaggucgau aguacuggau ccccc      96
333 <210> SEQ ID NO: 16
334 <211> LENGTH: 96
335 <212> TYPE: RNA
C--> 336 <213> ORGANISM: Artificial
338 <220> FEATURE:
339 <223> OTHER INFORMATION: RNA aptamer
341 <220> FEATURE:
342 <221> NAME/KEY: misc_feature
343 <222> LOCATION: (1)..(96)
344 <223> OTHER INFORMATION: RNA aptamer
347 <400> SEQUENCE: 16
348 gggagagagg aagaggggaug ggaccgauaac gacuacugc gaaucacc aucagcgcac      60
350 aacauaacc agaggucgau aguacuggau ccccc      96
353 <210> SEQ ID NO: 17
354 <211> LENGTH: 96
355 <212> TYPE: RNA
C--> 356 <213> ORGANISM: Artificial
358 <220> FEATURE:
359 <223> OTHER INFORMATION: RNA aptamer
361 <220> FEATURE:
362 <221> NAME/KEY: misc_feature
363 <222> LOCATION: (1)..(96)
364 <223> OTHER INFORMATION: RNA aptamer
367 <400> SEQUENCE: 17
368 gggagagagg aagaggggaug gggacuauac cggcaaucg gcaucccug gaccuaacaa      60

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/963,827B

DATE: 08/07/2002
TIME: 11:30:37

Input Set : A:\180-124-2 updated 05-03-02.ST25.txt
Output Set: N:\CRF3\08072002\I963827B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:11; N Pos. 54,56
Seq#:15; N Pos. 54
Seq#:25; N Pos. 46
Seq#:106; N Pos. 12,13
Seq#:120; N Pos. 1,11,21,38
Seq#:125; N Pos. 3,11,35
Seq#:134; N Pos. 9,19,24,29,36
Seq#:140; N Pos. 18,36,40,43

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27
Seq#:28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51
Seq#:52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75
Seq#:76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99
Seq#:100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117
Seq#:118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135
Seq#:136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153
Seq#:154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171
Seq#:172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189
Seq#:190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207
Seq#:208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225
Seq#:226,227

VERIFICATION SUMMARY

DATE: 08/07/2002

PATENT APPLICATION: US/09/963,827B

TIME: 11:30:37

Input Set : A:\180-124-2 updated 05-03-02.ST25.txt

Output Set: N:\CRF3\08072002\I963827B.raw

L:24 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:1
L:44 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:2
L:64 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:3
L:70 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:3
L:84 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:4
L:104 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:5
L:124 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:6
L:144 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:7
L:164 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:8
L:184 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:9
L:204 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:10
L:224 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:11
L:242 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
L:250 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:12
L:270 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:13
L:290 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:14
L:310 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:15
L:328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
L:336 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:16
L:356 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:17
L:376 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:18
L:396 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:19
L:416 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:20
L:436 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:21
L:456 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:22
L:476 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:23
L:496 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:24
L:516 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:25
L:534 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
L:542 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:26
L:562 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:27
L:582 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:28
L:602 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:29
L:622 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:30
L:642 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:31
L:662 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:32
L:682 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:33
L:702 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:34
L:722 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:35
L:742 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:36
L:762 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:37
L:782 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:38
L:802 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:39
L:822 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:40
L:842 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:41
L:862 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:42
L:882 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:43
L:902 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:44

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/963,827B

DATE: 08/07/2002

TIME: 11:30:37

Input Set : A:\180-124-2 updated 05-03-02.ST25.txt

Output Set: N:\CRF3\08072002\I963827B.raw

L:922 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:45
L:942 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:46
L:962 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:47
L:982 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:48
L:1000 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:49
L:1018 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:50
L:1567 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:80
L:2041 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106 after pos.:0
L:2299 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:120 after pos.:0
L:2395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:125 after pos.:0
L:2563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:134 after pos.:0
L:2677 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:140 after pos.:0